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EXAMINER	
GOFF II, JOHN L	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/910,337	YU ET AL.	
	Examiner	Art Unit	
	John L. Goff	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

4a) Of the above claim(s) *7,21,24 and 31-48* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8-20,22,23 and 25-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 July 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. In view of the appeal brief filed on 4/14/04, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. Claims 1-6 and 8-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 requires "providing a crosslinkable thermoplastic consisting essentially of polyolefin". It is unclear where in the specification the crosslinkable thermoplastic

is described as "consisting essentially of polyolefin". It is noted the specification does disclose the crosslinkable thermoplastic as "comprising a polyolefin" (Page 3, lines 21-22). However, "comprising" is inclusive or open-ended and does not exclude additional, unrecited elements or method steps whereas "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" (See MPEP 211.03). It is unclear where in the specification the exclusion of any materials (specifically any of the materials that do not affect the basic and novel characteristics of the crosslinkable thermoplastic) is disclosed such that there is no support in the specification to claim, "consisting essentially of".

4. Claims 1-6 and 8-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "consisting essentially of" in claim 1 is a relative term which renders the claim indefinite. The term "consisting essentially of" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Claim 1 requires "providing a crosslinkable thermoplastic consisting essentially of polyolefin". It is unclear what is required by the term "consisting essentially of". Specifically, the specification does not disclose including any additional materials that could be used in the crosslinkable thermoplastic that do not materially affect the basic and novel characteristics of the crosslinkable thermoplastic.

Claim Rejections - 35 USC § 102/103

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 8-11, 13, and 14 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Chapellier (FR 2730783 and the English abstract).

Chapellier discloses a method for forming a low-friction sealing profile for a car window or door frame, i.e. an automobile glass run channel. Chapellier discloses providing an elastomer, providing a crosslinkable thermoplastic consisting essentially of polyethylene, extruding the elastomer to form a main body member, extruding the crosslinkable thermoplastic to form an abrasion resistant layer/tape having a thickness of 0.004-0.016 inches, contacting the abrasion resistant layer with the main body member, laminating the abrasion resistant layer with the main body member by pressing with a lamination wheel, and then curing/vulcanizing the main body member and crosslinking the abrasion resistant layer to form the sealing profile (See English abstract and Figures 1-3 and Page 4, lines 5-24 of FR 2730783). It appears the extrudable and vulcanizable elastomer taught by Chapellier is rubber although it is unclear as to whether or not

Chapellier specifically discloses such. In any event, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the elastomer of the main body member taught by Chapellier rubber as it was well known and conventional in the art when forming a sealing profile for a car window or door frame to use thermoset elastomer rubber to form a sealing profile that is flexible and has good weatherability properties.

Regarding claim 9, Chapellier appears to teach co-extruding the main body member and abrasion resistant layer through a common device (See 12 of Figure 3 the description obtained by oral translation) such that the limitation is met. However, if Chapellier does not specifically teach using a common extrusion device/die, it would have been obvious to one of ordinary skill in the art at the time the invention was made to perform co-extrusion of the main body member and abrasion resistant layer as taught by Chapellier using any well known and conventional device such as through a common die as only the expected results would be achieved.

Regarding claim 10, a "tape member" requires nothing more than the extruded abrasion resistant layer taught by Chapellier.

Claim Rejections - 35 USC § 103

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1, 8-15, 22, 23, and 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapellier in view of either one of Edwards (5,183,613) or Cook (U.S. Patent 5,415,822).

Chapellier is described above in paragraph 7 in full detail. It is noted it appears the extrudable and vulcanizable elastomer taught by Chapellier is rubber although it is unclear as to whether or not Chapellier specifically discloses such. In any event, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the elastomer of the main body member taught by Chapellier rubber and specifically ethylene-propylene-diene terpolymer rubber (EPDM) as it was well known and conventional in the art when forming a sealing profile for a car window or door frame to use EPDM to form a sealing profile that is flexible and has good weatherability properties as shown for example by either one of Edwards or Cook.

Regarding claim 15, it is noted Chapellier is silent as to a specific temperature for extruding the crosslinkable thermoplastic. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize the extrusion temperature of the crosslinkable thermoplastic taught by Chapellier as modified by either one of Edwards or Cook as a function of the particular crosslinkable thermoplastic used as doing so would have required nothing more than ordinary skill and routine experimentation with it being further noted Cook teaches extrusion temperatures of 140-250 °C for a broad range of

abrasion resistant thermoplastic layers including those comprising crosslinkable polyethylene, the same crosslinkable thermoplastic used in Chapellier.

Regarding claims 9 and 23, Chapellier appears to teach co-extruding the main body member and abrasion resistant layer through a common device (See 12 of Figure 3 the description obtained by oral translation) such that it the limitation is met. However, if Chapellier as modified by either one of Edwards or Cook does not specifically teach using a common extrusion device/die, it would have been obvious to one of ordinary skill in the art at the time the invention was made to perform co-extrusion of the main body member and abrasion resistant layer as taught by Chapellier as modified by either one of Edwards or Cook using any well known and conventional device such as through a common die as only the expected results would be achieved.

Regarding claims 10 and 26, a "tape member" requires nothing more than the extruded abrasion resistant layer taught by Chapellier as modified by either one of Edwards or Cook.

Edwards is directed to a process for forming a glass run channel for use in an automotive application. Edwards teaches a composite extrusion comprising a channel member made of thermoset elastomer such as EPDM and an abrasion resistant layer made of thermoplastic material such as a polyolefin. Edwards teaches using EPDM forms a glass run channel that is flexible and has good weatherability properties. Edwards teaches forming the composite extrusion by co-extruding the channel member (at a temperature of 60-150 °C) and abrasion resistant layer (at a temperature greater than 200 °C) such that the abrasion resistant layer contacts the channel member forming a 0.2 to 0.4 mm abrasion resistant layer on the channel member. Edwards then teaches curing the channel member to form the glass run channel (Figure

1 and Column 1, lines 9-14 and Column 6, lines 35-61 and Column 8, lines 36-44 and Column 9, lines 11-14 and Column 11, lines 24-33 and 45-51 and Column 12, lines 1-8 and 12-15).

Cook is directed to manufacturing composite extrusions for use as glass run channels. Cook teaches a composite extrusion comprising a main body member made of thermoset material such as EPDM and an abrasion resistant layer made of thermoplastic material such as polyolefin (e.g. polyethylene) which can be crosslinked by peroxides, moisture, UV, and other systems. Cook teaches the abrasion resistant layer may comprise additional components other than polyolefin. However, the primary material of the abrasion resistant layer is polyolefin such that the abrasion resistant layer taught by Cook comprises "essentially" polyolefin. Cook teaches forming the composite extrusion by extruding the main body member (at a temperature of 80-150 °C), curing the main body member (at a temperature of 180-250 °C), and extruding on top of the main body member the abrasion resistant layer (at a temperature greater than 140-250 °C) such that the main body member and abrasion resistant layer form a bonded composite (Figure 1 and Column 1, lines 8-14 and Column 4, lines 15-24, 30-34, and 37-40 and Column 5, lines 7-36).

10. Claims 2-6 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapellier or Chapellier in view of ether one of Edwards or Cook as applied above in paragraphs 7 and 9 respectively, and further in view of Scott et al. (U.S. Patent 3,646,155).

Chapellier and Chapellier as modified by either one of Edwards or Cook teach all of the limitations in claims 2-6 and 16-20 as applied above except for a specific teaching of using as the abrasion resistant layer a silane grafted polyethylene that is crosslinked in a steam bath, it being noted Chapellier teaches using as the abrasion resistant layer a crosslinkable polyethylene that is

crosslinked after curing of the main body member by any means (See 17 of Figure 3 the description obtained by oral translation). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the crosslinkable polyethylene taught by Chapellier or Chapellier as modified by either one of Edwards or Cook any well known and conventional crosslinkable polyethylene such as a steam bath crosslinked silane grafted polyethylene as shown for example by Scott et al. as this was a known crosslinkable polyethylene that is crosslinked under less critical crosslinking conditions than those which are normally present in conventional crosslinking techniques.

Regarding claims 5, 6, 19, and 20, it is noted Chapellier is silent as to specific times and temperatures for extruding the main body member, extruding the crosslinkable thermoplastic, and curing the main body member. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize the extrusion temperature of the crosslinkable thermoplastic taught by Chapellier as modified by Scott et al. or Chapellier as modified by either one of Edwards or Cook and Scott et al. as a function of the particular main body member material used, crosslinkable thermoplastic material used, etc. as doing so would have required nothing more than ordinary skill and routine experimentation with it being further noted Edwards teaches extruding the main body member at a temperature of 60-150 °C and extruding the abrasion resistant layer at a temperature greater than 200 °C while Cook teaches extruding the main body member at a temperature of 80-150 °C, curing the main body member at a temperature of 180-250 °C, and extruding the abrasion resistant thermoplastic layer, e.g. comprising crosslinkable polyethylene, at temperatures of 140-250 °C.

Scott et al. are directed to crosslinking polyolefins. Scott et al. teach crosslinking the polyolefins, e.g. polyethylene, with a silane reactant in a steam bath (at temperatures above 100 °C), wherein crosslinking of the polyolefin with the silane enables crosslinking of the polyolefin under less critical crosslinking conditions than those which are normally present in conventional crosslinking techniques (Column 1, lines 22-24 and 54-61 and Column 3, lines 50-51 and 74-75 and Column 4, lines 1-11 and Column 5, lines 14-17).

11. Claims 1, 2, 8-16, 19, 22, 23, and 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards in view of either one of Chapellier or Cook.

Edwards is described above in paragraph 9 in full detail. Edwards is silent as to a specific recitation for using as the abrasion resistant layer a crosslinkable polyolefin. However, it is noted Edwards is directed to using general polyolefins known to one in the art, and Edwards is not limited to any particular, i.e. crosslinkable or non-crosslinkable, polyolefin. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the polyolefin taught by Edwards any well known and conventional polyolefin such as a crosslinkable polyolefin to form a low-friction abrasion resistant layer as was well known in the art as shown for example by either one of Chapellier or Cook. Chapellier is described above in paragraph 7 in full detail. Cook is described above in paragraph 9 in full detail.

Regarding claims 8 and 22, it is noted that Edwards teaches the abrasion resistant layer is co-extruded along with the channel member and the two layers are contacted directly after extrusion, i.e. Edwards teaches the extruded abrasion resistant layer contacts the uncured channel member (Column 11, lines 24-33), such that it would have been obvious to one of ordinary skill in the art at the time the invention was made that the modification of Edwards with the

crosslinkable abrasion resistant layer taught by either one of Chapellier or Cook would create a process wherein the abrasion resistant layer is crosslinked after contacting the channel member because (1) the two layers are co-extruded, i.e. the abrasion resistant layer could not be extruded if it were already crosslinked and (2) the layers are contacted directly after extrusion, it being noted this arrangement is further shown by Chapellier wherein crosslinking of the abrasion resistant layer does not occur until after contacting with the main body member.

Regarding claims 9 and 23, it is noted Edwards teaches co-extrusion occurs using "any suitable extrusion apparatus in a conventional manner as is well know in the art and literature" such that it would have been obvious to one of ordinary skill in the art at the time the invention was made that conventional co-extrusion taught by Edwards would include co-extrusion through a common, conventional extrusion die as only the expected results would be achieved.

Regarding claims 10 and 26, a "tape member" requires nothing more than the extruded abrasion resistant layer taught by Edwards as modified by either one of Chapellier or Cook.

Regarding claims 11 and 27, Edwards does not specify any particular apparatus for laminating/contacting the abrasion resistant layer and channel member such that it would have been obvious to one of ordinary skill in the art at the time the invention was made to laminate/contact them in any well known and conventional manner such as by pressing with lamination wheels as was known in the art as shown for example by Chapellier wherein only the expected results would be achieved.

12. Claims 2-6 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards and either one of Chapellier or Cook as applied above in paragraph 11, and further in view of Scott et al.

Edwards and either one of Chapellier or Cook teach all of the limitations in claims 2-6 and 16-20 as applied above except for specific teaching of using as the abrasion resistant layer a silane grafted polyolefin that is crosslinked in a steam bath, it being noted Chapellier teaches using as the abrasion resistant layer a crosslinkable polyethylene (crosslinked by no particular means) and Cook teaches using a moisture crosslinkable polyethylene. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the crosslinkable polyethylene taught by Edwards as modified by either one of Chapellier or Cook any well known and conventional crosslinkable polyethylene such as a steam bath crosslinked silane grafted polyethylene as shown for example by Scott et al. as this was a known crosslinkable polyethylene that is crosslinked under less critical crosslinking conditions than those which are normally present in conventional crosslinking techniques. Scott et al. is described above in paragraph 10 in full detail.

Regarding claims 5, 6, 19, and 20, it is noted Edwards is silent as to specific times and temperatures for extruding the main body member, extruding the crosslinkable thermoplastic, and curing the main body member. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize the extrusion temperature of the crosslinkable thermoplastic taught by Edwards as modified by either one of Chapellier or Cook and Scott et al. as a function of the particular main body member material used, crosslinkable thermoplastic material used, etc. as doing so would have required

nothing more than ordinary skill and routine experimentation with it being further noted Edwards teaches extruding the main body member at a temperature of 60-150 °C and extruding the abrasion resistant layer at a temperature greater than 200 °C while Cook teaches extruding the main body member at a temperature of 80-150 °C, curing the main body member at a temperature of 180-250 °C, and extruding the abrasion resistant thermoplastic layer, e.g. comprising crosslinkable polyethylene, at temperatures of 140-250 °C.

Response to Arguments

13. Applicant's arguments with respect to claims 1-6, 8-20, 22, 23, and 25-30 have been considered but are moot in view of the new ground(s) of rejection. It is noted the previous rejections involving Hyashi et al. are withdrawn.

Applicant argues the 35 U.S.C. 112 first and second paragraph rejections in that applicants are not required to list every material that could possibly be included in the crosslinkable thermoplastic, including those that do not affect is material characteristics. It is noted the specification discloses the crosslinkable thermoplastic as "comprising a polyolefin". However, "comprising" is inclusive or open-ended and does not exclude additional, unrecited elements or method steps whereas "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" (See MPEP 211.03), and while applicant is not required to list in the specification **all** materials that could be included in the crosslinkable thermoplastic that do not affect the material characteristics of the crosslinkable thermoplastic, the specification does not disclose **any** of these materials such that there is no support in the specification to limit the claim

to this transitional phrase and there is no description in the specification of what this transitional phrase requires.

Applicant further argues there is no motivation to combine Edwards and Cook. It is noted Edwards is directed to forming a glass run channel having a low friction abrasion resistant layer wherein the layer comprises general polyolefins known to one in the art, and Edwards is not limited to any particular, i.e. crosslinkable or non-crosslinkable, polyolefin. Chapellier and Cook are cited as examples of the well known technique of using crosslinkable polyethylene to form a low-friction abrasion resistant layer on a glass run channel.

Applicant further argues nowhere does Edwards or Cook require that the layers be contacted immediately after extrusion with no intervening steps. It is noted Edwards teaches the extruded abrasion resistant layer contacts the uncured channel member (Column 11, lines 24-33) such that clearly the layers are contacted after extrusion with no intervening steps. It is further noted Chapellier shows a method substantially the same as that of Edwards except for including the use of a crosslinkable thermoplastic abrasion resistant layer wherein crosslinking of the abrasion resistant layer (and curing of the main body member) does not occur until after contacting with the main body member.

Applicant further argues there is no motivation to combine Edwards and Cook with Scott et al. It is noted Edwards in view of either one of Chapellier or Cook show forming a glass run channel having an abrasion resistant layer comprising a crosslinkable polyethylene. Neither Chapellier nor Cook are limited to a particular polyethylene or particular method for crosslinking the polyethylene. Thus, Scott et al. is cited as an example in the art of a crosslinkable

polyethylene that is crosslinked under less critical crosslinking conditions, i.e. easier to crosslink, than those which are normally present in conventional crosslinking techniques.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **(571) 272-1216**. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John L. Goff
June 21, 2004

JEFF H. AFTERGUT
PRIMARY EXAMINER
GROUP 1300